SUPPORT FOR THE AMENDMENTS

This Amendment amends Claims 35-36; and adds new Claims 37-48. Support for the amendments is found in the specification and claims as originally filed. In particular, support for Claim 35 is found in the specification at least at page 7, line 23 and page 16, second paragraph, line 2 (silica glass powder layer is formed as an additional layer on a main body of a crucible) and page 10, lines 9-11 (the silica glass powder layer may be formed in ring configuration on an upper end portion of the inside surface). Support for Claim 36 is found in previous wordings of Claim 36. Claims 37-41 limit the configuration of the silica glass powder layer. It is certain that a crucible that can hold molten silicon (bottom line of third paragraph on page 10) and can be used as a crucible for pulling a semiconductor (e.g., line 2 on second paragraph of page 16) has a bottom portion. As an alternative to a silica glass powder layer on the whole outside surface of the crucible, the silica glass powder layer may be formed on a part of the outside surface of the crucible in a ring configuration so as to go around the periphery of the crucible (lines 5-8 of the third paragraph of page 10). In such configuration, it is obvious that an outside surface of the crucible main body is exposed in the bottom portion. In addition, where the silica powder layer is formed in ring configuration on an upper end portion of the inside surface and is not contacted with a molten silicon, the silica powder layer is not formed on the bottom portion of the inside surface of the crucible. Support for Claim 42 is found in the specification at least at page 13, second paragraph, line 8. Support for Claim 43 is found in the specification at least at page 7, lines 11-19. Support for Claims 44-45 is found in the specification at least at page 10, second paragraph. Support for Claim 47 is found in the specification at least at page 12, bottom paragraph, and page 13, second paragraph, line 10. No new matter would be introduced by entry of these amendments. Upon entry of these amendments, Claims 35-48 will be pending in this application. Claim 35 is independent.

REQUEST FOR RECONSIDERATION

Applicants respectfully request entry of the foregoing and reexamination and reconsideration of the application, as amended, in light of the remarks that follow.

Claim 35 is rejected under 35 U.S.C. §102(b) over WO 01/92609 ("Ohama").

The Final Rejection asserted that Ohama disclosed a multilayer silica crucible comprising a porous silica glass powder outer layer 3a and a porous silica glass powder layer 13, and this read on forming a silica glass powder layer on a part of the surface of the crucible.

Ohama describes a multilayer structured quartz glass crucible. The crucible comprises at least three layers of a translucent outer layer made of naturally occurring quartz glass, a translucent intermediate layer made of synthetic quartz glass, and a transparent inner layer made of synthetic quartz glass. (Claim 1).

On page 12, referenced in the Final Rejection, an outer layer molded body is molded into a shape of a crucible by supplying a naturally occurring quartz powder inside the cavity of the mold 1. After that, the outer layer 3 is formed by heating and fusing from the inner side.

That is, 13a is not a powder layer formed on the outer surface of the crucible, but is a powder layer formed as a preform of an outer layer of the crucible. When 13a exist as a powder layer, no glass crucible exists in its vicinity. The powder preform which should be deformed if it was removed from the mold cannot be called a crucible.

In the second embodiment, a synthetic silica glass powder is supplied to the inner side of the layer 3 to obtain an intermediate molded body. Although the powder layer 13a is formed on the glass layer 3 at that instance, this layer 13a is heated and fused to form a

translucent intermediate layer 13. The transparent inner layer is formed by fusing and scattering a synthetic glass powder (first paragraph on page 13).

In the first embodiment, the intermediate molded body 13a is formed along the inner side of the outer layer molded body 3a. After that, the intermediate molded body 13a and the outer layer molded body 3a are heated and fused to obtain a double layered molded body A. The inner layer is formed by scattering fused glass. (Bottom paragraph on page 10 to first paragraph on page 11). That is, the first embodiment does not show a combination of a glass layer and a powder layer at any stage.

In the intermediate form of the second embodiment, the layer 13 a covers whole of the inside surface of the outer layer 3 (FIG. 4). In Ohama, the translucent intermediate layer (13) made of synthetic quartz glass is provided between the outer layer made of naturally occurring quartz glass and a transparent inner layer so as to minimize the temperature difference depending on the inner plane of the quartz crucible (bottom paragraph on page 4 to the first paragraph on page 5). For this purpose, the intermediate layer should have a configuration uniformly covering the inside of the outer layer. Therefore, a ring configuration of a silica powder layer on an upper end portion of the inside surface of the crucible is not taught by Ohama.

Because Ohama fails to disclose or suggest the constitution described in Claim 35, the rejection under 35 U.S.C. §102(b) over Ohama should be withdrawn.

Claim 36 is rejected under 35 U.S.C. §103(a) over Ohama in view of U.S. Patent No. 5,389,582 ("Loxley").

Firstly, since Ohama fails to teach the constitution of Claim 35, it is impossible to obtain a constitution of Claim 36 by limiting the grain size of the powder of Ohama.

In addition, Loxley fails to suggest that silica glass powder includes coarse particles as well as fine particles having a grain size of less than $10\mu m$. If the silica glass powder has

a narrow size distribution, there is a possibility of occurring crack or the like by shrinkage of the powder layer at a time of heating (lines 13-19 on page 7).

In the present application, silica powder layer is sintered and further crystallized in the time of heating the crucible, and such crystallized layer reinforces the crucible and prevents deformation of the crucible at a high temperature stage. On the other hand, Loxley intends to distribute nucleation site of cristobalite uniformly in the glass. Such a different intention cannot suggest modification of the grain size distribution of Loxley.

Because the cited prior art fails to suggest the constitution described in Claim 36, the rejection of Claim 36 under 35 U.S.C. §103(a) over Ohama in view of Loxley should be withdrawn.

Claims 35-36 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner asserted that the wording "not contacted with a molten silicon" in Claim 35 were not supported by the description. However, such wording is clearly described in the specification at page 4, line 22 and page 10, third paragraph, bottom line. In the current amendments, the above-described limitation is replaced by an alternative description such that the silica glass powder layer in ring configuration on the inside surface is limited by its position on the upper end portion. Thus, the rejection should be withdrawn.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance. Applicants respectfully request favorable consideration and prompt allowance of the application.

Should the Examiner believe that anything further is necessary in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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